METHOD AND SYSTEM FOR INCREASING PERFORMANCE BY SUBSTITUTING FINITE STATE MACHINE CONTROL WITH HARDWARE-IMPLEMENTED DATA STRUCTURE MANIPULATION

5 **Abstract Of The Disclosure**

A method for replacing finite state machine hardware implementations of controllers and controller subcomponents with implementations based on manipulating contexts stored within common data structures, such as

10 linked lists, and an outbound sequence manager subcomponent of a fibre channel interface controller implemented by this method. A state transition diagram is analyzed to define managers within the controller, along with commands received by, and generated by, each manager. Data structures are chosen for each manager to store contexts representing tasks currently operated on by the manager. An

15 additional manger and interface are designed for a data-structure-manipulation manager. Finally, the operations performed by the managers are defined and implemented, with sequencing of operations controlled by transfer of contexts between data structures by the data-structure-manipulation manager.